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METHOD FOR FINE PROCESSING OF FOOD GRAINS

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Abstract

This patent pertains to a method for fine processing of food grains by selecting (1) corn or a mixture of corn with one or more kinds of sorghum, beans, peanuts and dried potato; (2) sorghum or a mixture of sorghum with one or more kinds of beans, peanuts and dried potato, adding table salt and soda, wherein the quantity of salt added is 0.1-0.2% with respect to the weight of the grains and the quantity of soda added is 0.05-0.1% with respect to the weight of the grains, and subsequently pulverizing 3 times, wherein the first pulverization is conducted for 30-40 sec while maintaining the temperature of the grains at 55-65°C, followed by sieving through 60-80 mesh; the second pulverization is conducted for 60-90 sec while maintaining the temperature of the grains at 40-50°C, followed by sieving through 110-130 mesh; the third pulverization is conducted for 30-40 sec while maintaining the temperature of the grains at 20-30°C, followed by sieving through 130-160 mesh, the grains produced by the process of the present invention are rich in nutrients and flavorful and can be utilized for producing noodles and dumplings as well as in fast food.

Claims

1. A method for fine processing of food grains, characterized by selecting (1) corn or a mixture of corn with one or more kinds of sorghum, beans, peanuts and dried potato; (2) sorghum or a mixture of sorghum with one or more kinds of beans, peanuts and dried potato, adding table salt and soda, wherein the quantity of salt added is 0.1-0.2% with respect to the weight of the grains and the quantity of soda added is 0.05-0.1% with respect to the weight of the grains, and subsequently pulverizing 3 times, wherein the first pulverization is conducted for 30-40 sec while maintaining the temperature of the grains at 55-65°C, followed by sieving through 60-80 mesh; the second pulverization is conducted for 60-90 sec while maintaining the temperature of the grains at 40-50°C, followed by sieving through 110-130 mesh; the third pulverization is conducted for 30-40 sec while maintaining the temperature of the grains at 20-30°C, followed by sieving through 130-160 mesh.

2. The method for fine processing of food grains described in Claim 1, characterized in that said beans are selected from soybeans, red beans and black beans.

Description

Technical field

This invention pertains to a method for processing agricultural products, particularly a method for fine processing of food grains.

Technical background

The conventional method for processing of food grains is the traditional single pulverization processing method. Even though the grains are rich in nutrients after processing, said method has disadvantages such as poor flavor and essentially no texture. The products are particularly unsuitable for producing noodles or dumplings because they are not widely accepted by consumers.

Content of the invention

The technical problem to be solved by the present invention is how to provide a method for fine processing of food grains for producing noodles and dumplings.

The technical scheme of the present invention is as follows: The present invention is carried out by selecting (1) corn or a mixture of corn with one or more kinds of sorghum, beans, peanuts and dried potato; (2) sorghum or a mixture of sorghum with one or more kinds of beans, peanuts and dried potato, adding table salt and soda, wherein the quantity of salt added is 0.1-0.2% with respect to the weight of the grains and the quantity of soda added is 0.05-0.1% with respect to the weight of the grains, and subsequently pulverizing 3 times, wherein the first pulverization is conducted for 30-40 sec while maintaining the temperature of the grains at 55-65°C, followed by sieving through 60-80 mesh; the second pulverization is conducted for 60-90 sec while maintaining the temperature of the grains at 40-50°C, followed by sieving through 110-130 mesh; the third pulverization is conducted for 30-40 sec while maintaining the temperature of the grains at 20-30°C, followed by sieving through 130-160 mesh.

Said beans of the present invention are selected from soybeans, red beans and black beans.

The positive effects of the present invention are as follows:

The traditional method for processing of food grains is the single pulverization processing method. While the grains are rich in nutrients after processing, the products are poor in flavor and have essentially no texture. The processing method of the present invention is suitable for corn or sorghum or any combination of corn and sorghum with one or more various other materials at any blending weight; for example, (1) corn, (2) sorghum + beans, (3) sorghum + corn + beans, (4) corn + sorghum + peanuts + beans + dried potato, (5) sorghum and (6) sorghum + peanuts can be selected, after which suitable quantities of table salt and soda are added. The single pulverization processing is replaced with the processing method of 3 pulverizations at different temperatures to alter the flavor and develop texture to make the flavor more similar to that of wheat flour and the texture also more similar to that of wheat flour. No chemical additives such as gelatin are added in the processing method of the present invention and the processed grains can be utilized in preparing dumplings and hand-made noodles, reconstitutable noodles for noodle stew and preparing fast food widely accepted by consumers.

Specific application examples

The present invention is described in detail using the following application examples.

Application Example 1

Table salt and soda were added to corn (or sorghum). The quantity of addition for the table salt was 0.1% with respect to the weight of the corn (or sorghum) and the quantity of addition for the soda was 0.07% with respect to the weight of corn (or sorghum), followed by subsequently pulverizing 3 times, wherein the first pulverization was conducted for 35 sec while maintaining the temperature of the corn (or sorghum) at 55°C and sieving through 60 mesh; the second pulverization was conducted for 75 sec while maintaining the temperature of the corn (or sorghum) at 45°C and sieving through 110 mesh; the third pulverization was conducted for 30 sec while maintaining the temperature of the corn (or sorghum) at 20°C and sieving through 130 mesh.

Application Example 2

Corn, peanuts and soybeans were mixed, and table salt and soda were added to this mixture. The quantity of addition for the table salt was 0.15% with respect to the weight of the mixture and the quantity of addition for the soda was 0.05% with respect to the weight of the mixture, followed by subsequently pulverizing 3 times, wherein the first pulverization was conducted for 30 sec while maintaining the temperature of the mixture at 65°C and sieving through 80 mesh; the second pulverization was conducted for 60 sec while maintaining the temperature of the mixture at 40°C and sieving through 130 mesh; the third pulverization was conducted for 40 sec while maintaining the temperature of the mixture at 30°C and sieving through 160 mesh.

Application Example 3

Sorghum, black beans and dried potatoes were mixed, and table salt and soda were added to this mixture. The quantity of addition for the table salt was 0.15% with respect to the weight of the mixture and the quantity of addition for the soda was 0.05% with respect to the weight of the mixture, followed by subsequently pulverizing 3 times wherein the first pulverization was conducted for 30 sec while maintaining the temperature of the mixture at 65°C and sieving through 80 mesh; the second pulverization was conducted for 60 sec while maintaining the temperature of the mixture at 40°C and sieving through 130 mesh; the third pulverization was conducted for 40 sec while maintaining the temperature of the mixture at 30°C and sieving through 160 mesh.

Application Example 4

Corn, sorghum, red beans, peanuts and dried potatoes were mixed, and table salt and soda were added to this mixture. The quantity of addition for the table salt was 0.2% with respect to the weight of the mixture and the quantity of addition for the soda was 0.1% with respect to the weight of the mixture, followed by subsequently pulverizing 3 times wherein the first pulverization was conducted for 40 sec while maintaining the temperature of the mixture at 60°C and sieving through 70 mesh; the second pulverization was conducted for 90 sec while maintaining the temperature of the mixture at 50°C and sieving through 120 mesh; the third pulverization was conducted for 35 sec while maintaining the temperature of the mixture at 25°C and sieving through 145 mesh.